1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CONCERNING THE DEFINITION OF DIENCEPHALIC EPILESPY -U-

AUTHOR--GROMOV, S.A.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970, VOL 70, NR 6, PP 896-902
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EPILEPSY, PNEUMOENCEPHALOGRAPHY, EPINEPHRINE, NOREPINEPHRINE, ACETYLCHOLINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0230 STEP NO--UR/0246/70/070/006/0896/0902

CIRC ACCESSION NO--AP0126012
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0126012

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR CONVENED AN ANATOMICAL (BY THE METHOD OF DIRECTED PNEUMOENCEPHALOGRAPHY) AND FUNCTIONAL STUDY (DETERMINATION OF ADRENALIN, NORADRENALIN, ACETYLCHOLINE AND CHOLINESTERASE ACTIVITY) OF CHANGES IN THE HYPOTHALAMIC AREA IN DIENCEPHALIC EPILEPSY. A TOTAL AMOUNT OF 112 PATIENTS WITH DIENCEPHALIC EPILEPSY WERE STUDIED DURING THE INTERATTACK PERIOD. IT WAS ESTABLISHED THAT IN 95.3PERCENT OF THE CASES THERE WERE ANATOMICAL BRAIN CHANGES AND IN 76.1PERCENT THEY LOCALIZED IN THE AREA OF THE THIRD VENTRICULE. THE ADRENALIN, NORADRENALIN AND ACETYLCHOLINE CONTENT IN THE INTERATTACK PERIOD APPEARED TO BE CHANGED. IT IS IMPORTANT TO NOTE THAT THESE CHANGES WERE SEEN IRRESPECTIVE OF THE CHARACTER OF SEIZURES, I. E. BE THEY GENERALIZED (WITH LOSS OF CONSCIOUSNESS AND CONVULSIONS) OR PURELY VEGETATIVE. ON THE BASIS OF ACHIEVED RESULTS THE AUTHOR FINDS IT POSSIBLE TO SPEAK OF A UNITY IN DIENCEPHALIC EPILEPSY, WHICH IN SOME CASES MAY BE EXPRESSED BY GENERALIZED SEIZURES, WHILE AS IN OTHER, BY NONGENERALIZED ONES. DIENCEPHALIC CRISES ARE CONSIDERED TO BE SEPARATE PHASES OF AN ATTACK (SYMPATHICAL AND PARASYMPATHICAL). GENERALIZATION OF AN ATTACK, IN THE OPINION OF THE AUTHOR, TESTIFIES TO THE FORCE OF A PATHOLOGICAL EXCITATION AND THE DEGREE OF ITS DESTRIBUTION ON THE OTHER BRAIN AREAS. FACILITY: LENINGRADSKOGO NAUCHNO-ISSLED. PSIKHONEVROLOGICHESKOGO INSITUTA IM. V. M. BEKHTEREVA.

UNCLASSIFIED

JPRS 59208

6.73

XIII-5. ORIENTATION FUNCTION OF THE PROPERTIES OF GALLIUM ARSENIDE FILMS OBTAINED BY THE METHOD OF LIQUID EPITAXY

[Article by Yu. B. Bolkhovityanov, R. I. Bolkhovityanova, S. I. Gromov, Ye. I. Gutorov, E. L. Mel'nikov, Novosibirsk; Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June 1972, p 186]

Studies were made of the electron concentration and mobility in gallium arsenide films as a function of the substrate orientation. The substrate orientation was varied from (100) to (011) every 5°. It was discovered that the electron concentration in the films in the entire range of deviations varies by no more than 3 times. The highest rate of variation of the film properties is observed for deviation of the substrates from (111) both to (011) and to (100) by small angles. On deviation of the substrates from (100) to (111) by 5-10°, the electrophysical properties of the film vary insignificantly.

GROMOV, S. I.

USSR

UDC: 533.6.011

AFONINA, N. Ye., GROMOV, V. G.

"Investigation of Supersonic Flow of a Mixture Containing Carbon Dioxide Around Solids"

V sb. Nauch. konf. In-t mekh. Mosk. un-ta, Moskva, 22-24 maya 1972 g. Tezisy dokl. (Scientific Conference. Institute of Mechanics, Moscow University, Moscow, 22-24 May 1972. Abstracts of Papers), Moscow, 1972, p 6 (from RZh-Mekhanika, No 9, Sep 72, Abstract No 9B461)

Translation: The paper presents the results of calculation of viscous flow of a CO_2-N_2 gas mixture close to the critical stream line at Reynolds numbers from $10^{2.5}$ to $10^{5.5}$. The calculation is based on a system of equations which are a monomial approximation of a complete system of Navier-Stokes equations. This approximation is found by the "truncated series" method.

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USSR

UDC 532.526

GROMOV, V. G.

"Calculation of a Laminar Boundary Layer in the Presence of Unbalanced Chemical Reactions"

V sb. Novyye primeneniya metoda setok v gaz. dinamike. Vyp. 1 (New Applications of the Grid Method in Gasdynamics. No. 1 -- Collection of Works), Moscow, Moscow University, 1971; pp 31-63 (from RZh-Mekhanika, No 12, Dec 71, Abstract No 12B1125)

Translation: Nonequilibrium flow in a boundary layer of gas mixtures are discussed for fairly general boundary conditions at the wall for concentrations and temperature. The multicomponent character of diffusion is taken into account. Relationships are derived for determining the transfer coefficients and the thermodynamic functions of the gas mixture. The equations for the nonequilibrium boundary layer and the boundary conditions are described in vector-matrix form. A three-layer nonexplicit difference scheme is used for their solution. Application of this scheme instead of a two-layer scheme makes it possible to avoid recalculation in iterations of complex expressions for the transfer coefficients and the thermodynamic functions. The nonexplicit scheme ensures a more stable calculation under fairly large steps in the difference

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GROMOV, V. G., Novyye primeneniya metoda setok v gaz. dinamike. Vyp. 1, Moscow, Moscow University, 1971, pp 31-63

grid. Difference equations for longitudinal and transverse velocity components are solved by the scalar dispersion method, and essentially nonlinear difference vector-matrix equations for concentrations, temperature, and injection velocity are solved by the matrix dispersion method using Newton's method for solving nonlinear systems and equations. It is shown that the application of Newton's method improves the convergence of the iteration process in the case of near-equilibrium flow regimes. Calculations of the boundary layer correspond to three cases: (1) dissociated air in the presence of chemical balance on an impermeable surface of a dull body; (2) a dissociated mixture of oxygen and hydrogen with the components O, H, OH, H_2O, H_2, and O_2 in the neighborhood of the critical point of a blunt body with an impermeable and chemically neutral surface; (3) flow of dissociated carbon dioxide over a graphite sphere with simultaneous injection of hydrogen; chemical equilibrium on the surface of the sphere is assumed considering heterogeneous processes. The results of the calculations are presented in graphs. V. G. Voronkin.

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USSR

UDC 629.7.015.7

GROBOV, V. A., and KOTSYUBA, A. V., Kiev

"Unsteady Three-Dimensional Motion of an Aircraft Entering the Atmosphere at Hypersonc Velocity"

Kiev, Prikladnaya Mekhanika, Vol 8, No 12, Dec 72, pp 71-79

Abstract: The motion of the relative center of mass of an asymmetrical uncontrolled body is analyzed upon descending into the atmosphere along a given trajectory for which rotation around the longitudinal axis is noticed upon entry into the atmosphere. The method of perturbations was used to study the interrelated rotational motions and nonlinear vibrations along the angle of attack. Results of numerical calculations are presented which illustrate the nature of change of the longitudinal angular velocity and amplitude of vibrations in the process of descent. 3 figures, 6 bibliographic references.

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AA0044624

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

2/70

243246 CONDENSER FOR MEASURING DIELECTRIC CONSTANT OF GASES is proposed, incorporating thermal compensation by way of controlled movement of the mercury forming the condenser plate, on heating, so as to correct capacity values. The body 1 is threaded at 2 into a thermostatic chamber; 4,5 are cooling water nipples, 6 for attachment of exhaust pump or inert gas bottles. For testing aggressive gases a quartz ampoule 7 contains mercury, forming the inner condenser plate; the upper part 9 is empty. The outer plate is formed of mercury 10, filled before assembly. Textolite flange 13 and rubber washer 14 seal the top. The stainless steel electrode 17 ends in a steel tubular element 22 screening cavity 9. Its length and the quantity of mercury are chosen so that the capacity of the

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AUTHORS: Churin, G. V.; Rogozyanov, A. Ya.; Gromov, V. I.

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AA0044624

condenser does not change on heating without a test gas. Packings 2 ,24 prevent the fall of mercury into the cavity. Cavity 12 serves as a reservoir for the mercury expanding on heating in 10; there is no electrical field at 12, thus no effect on capacity. The penetration of mercury from the inner plate into 9 on heating provides a negative thermal coefficient depending on the geometry of the mercury and steel tube levels, which can be calibrated for each condenser before use. The negative coefficient will then compensate for increasing capacitance on heating, due to linear expansion of the metal components. Thus full stability of the empty condenser on heating is assured.

18.7.66 as 1092235/25-25.G.V.CHURIN et alia.(23.9.69)
Bul 16/5.5.69. Class 421. Int.Cl.G 01n.

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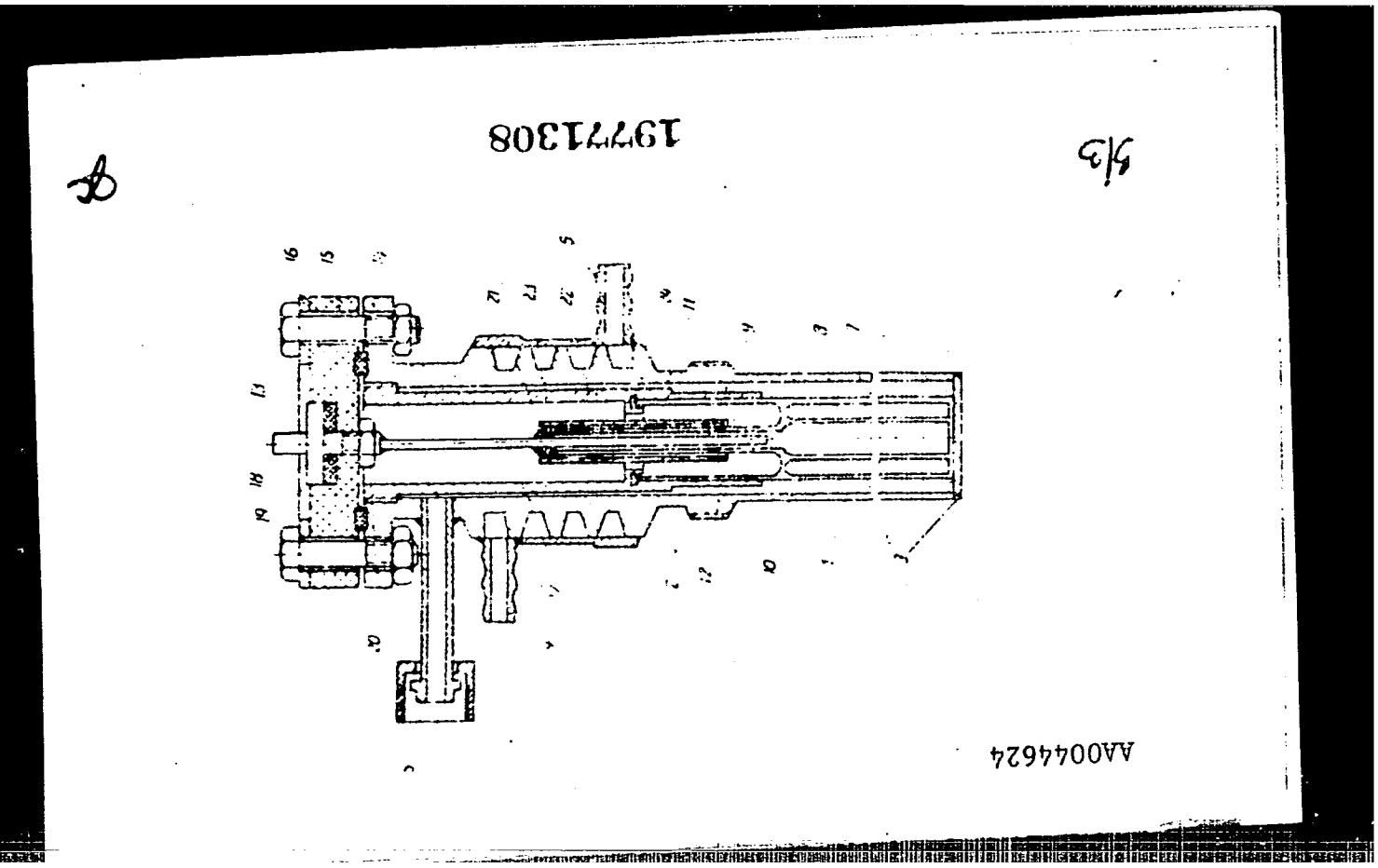
19771307



USSR

UDC 517.5

GROMOV, V. P., Moscow Power Engineering Institute

"Expression of Functions by Double Dirichlet Sequences"

Moscow, Matematicheskiye Zametki, Vol 7, No 1, Jan 70, pp 53-61

Abstract: The article considers the question of expressing regular functions of two complex variables by a double Dirichlet series of the form

$$\sum_{i,j=1}^{\infty} d_{ij} e^{\lambda_i z} e^{\mu_j z} \qquad (1)$$

with complex exponents. It is shown that for given sequences of complex numbers $\{\lambda_i\}$ and $\{\mu_j\}$ it is possible to indicate a maximal domain

USSR

GROMOV, V. P., Matematicheskiye Zametki, Vol 7, No 1, Jan 70, pp 53-61

D such that any regular function in $\bar{D}$ can be expressed in D by a series of form (1) with the indicated complex exponents. In his proof the author uses the basic scheme indicated by A. F. LEONT'YEV, but constructs the new function

$$\Phi_{k,l}(z, s, \lambda, \mu) =$$

$$= \frac{-1}{4\pi^2} \iint\limits_{\substack{|u|=p_k \\ |v|=q_l}} \frac{[\varphi_1(\lambda)\varphi_2(v) + \varphi_1(u)\varphi_1(\mu) - \varphi_1(\lambda)\varphi_2(\mu)]}{(u-\lambda)(v-\mu)\varphi_1(u)\varphi_2(v)} e^{uz} e^{vs} du\, dv.$$

which, along with the function $\omega_f(u, v)$, plays a leading role and makes it possible to evaluate the remainder of the double Dirichlet series.

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1/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EXPRESSION OF FUNCTIONS BY DOUBLE DIRICHLET SEQUENCES -U-

AUTHOR--GROMOV, V.P.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, MATEMATICHESKIYE ZAMETKI, VOL 7, NO 1, JAN 70, PP 53-61

DATE PUBLISHED----JAN70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--COMPLEX NUMBER, DIRICHLET PROBLEM, SERIES

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1002 STEP NO--UR/0499/70/007/001/0053/0061

CIRC ACCESSION NO--AP0112162
UNCLASSIFIED

2/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112162

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE CONSIDERS THE QUESTION OF EXPRESSING REGULAR FUNCTIONS OF TWO COMPLEX VARIABLES BY A DOUBLE DIRICHLET SERIES OF THE FORM (SHOWN ON MICROFICHE) WITH COMPLEX EXPONENTS. IT IS SHWON THAT FOR GIVEN SEQUENCES OF COMPLEX NUMBER (LAMBDA SUBI) AND (MU SUBI) IT IS POSSIBLE TO INDICATE A MAXIMAL DOMAIN D SUCH THAT ANY REGULAR FUNCTION IN BAR D CAN BE EXPRESSED IN D BY A SERIES OF FORM (1) WITH THE INDICATED COMPLEX EXPONENTS. IN HIS PROOF THE AUTHOR USES THE BASIC SCHEME INDICATED BY A. F. LEONT'YEV, BUT CONSTRUCTS THE NEW FUNCTION (SHOWN ON MICROFICHE) WHICH, ALONG WITH THE FUNCTION W SUBF (U,V), PLAYS A LEADING ROLE AND MAKES IT POSSIBLE TO EVALUATE THE REMAINDER OF THE DOUBLE DIRICHLET SERIES. FACILITY: MOSCOW POWER ENGINEERING INSTITUTE.

UNCLASSIFIED

USSR

UDC 621.382.3

GROMOV, V.S., KARNEYEVA, R.T.

"Investigation Of The Thermal Processes Within The Structure Of A Silicon Planar Transistor"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovodn. pribory (Electronic Technology. Scientific-Technical Collection. Semiconductor Devices), 1970, No 1(51), pp 45-54 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B221)

Translation: The experimental results are described of an investigation of the thermal properties of silicon planar transistors. It is shown that the geometry of the transistor structure substantially affects the thermal processes in the semiconductor crystal. It is established that in planar transistors the nonlinear change of temperature with an increase of the electrical power is determined only by the forward current flowing through the transistor. Author's Summary.

1/1

UDC 539.104:548.58

USSR

GROMOV, V. V., and MEDVEDEV, A. S.

"Kinetics of the Solution of Irradiated Uranium Oxides in Sulfuric Acid"

Leningrad, Radiokhimiya, Vol 13, No 5, 1971, pp 716-719

Abstract: During the investigation of the effect of γ-, β-, and n^0-radiation on the solution rate of U_3O_8, UO_3 and UO_2 in sulfuric acid it was determined that irradiation of U_3O_8 and UO_3 with gamma source results in lower transition of uranium into the liquid state in the investigated dose range, namely 10^{14}-10^{23} ev/h. γ-irradiation showed practically no effect on the solubility of UO_2 in 0.1 N $H_2S)_4$. Irradiation with β-particles shows no effect on the behavior of the investigated oxides in $H_2S)_4$ due to poor penetration of the β-particles into the crystalline lattice. Only the mixed uranium oxides were subjected to neutron irradiation; the rate of uranium transition into the liquid phase increased substantially after this irradiation. This is due to the destruction of crystalline lattice by the bombardment of neutrons. Maximum destruction of the irradiated oxide is

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USSR

GROMOV, V. V., and MEDVEDEV, A. S., Radiokhimiya, Vol 13, No 5, 1971, pp 716-719

observed with 10^{17} neutron/cm^2 doses. The ratio of uranium to oxygen remains constant, however, so that the final solubility is not altered, and after about 10 days becomes identical in both cases, i.e. the solution becomes saturated.

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USSR

BASOV, N. G., GROMOV, V. V., KOSHELEV, Ye. L., MARKIN, Ye. P., ORAYEVSKIY, A. N., SHAPOVALOVA, D. S., SHCHEGLOV, V. A., Physics Institute imeni P. N. Lebedev, Academy of Sciences, USSR

"A Continuous-Action DF — CO_2 Chemical Laser"

Moscow, Pis'ma v (Letters to the) Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 9, 5 May 1971, pp 496-498

Abstract: A report is given on obtaining continuous laser emission in subsonic gas streams. Generation takes place due to CO_2 molecules excited by means of the transmission of energy from oscillatorily excited DF* molecules obtained in the process of a chain reaction of deuterium with fluorine with purely chemical initiation. 2 figures. 2 bibliographic entries.

1/1

USSR UDC 621.791.052.001.5:669-419.4:669.295+669.14

TRUBILKO, V. I., Engineer, SAVCHENKOV, V. A., Candidate of Technical Sciences, SOTNIK, I. S., Engineer, GROMOV, Ye. I., Candidate of Chemical Sciences, and VAYL, YE. I., Engineer

"Electrochemical Study of Welded Joints in Titanium-Steel Bimetal"

Moscow, Svarochnoye Proizvodstvo, No 2, Feb 71, pp 13-15

Abstract: A study is presented of the electrochemical behavior of individual sectors in the welded joint -- the seam metal, near-seam zone, and base bimetal. Comparison of the maximum values of anode current of polarization curves made in 37% hydrochloric and 77% sulfuric acid and in an aqueous solution of ammonium chloride indicates that the process of corrosion occurs more rapidly in hydrochloric acid, somewhat more slowly in 77% sulfuric acid. The corrosion resistance of the specimens studied (titanium-steel produced by rolling in a vacuum of $5 \cdot 10^{-5}$ mm Hg at 1000°C with 20% compression) in ammonium chloride was high. The same types of polarization curves were produced in all the corrosive media studied. The metal of the seam and the zone near the seam have more positive electrode potential than the bimetal in the initial state in the acids.

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GROMOV, Ye. M.

SUBSCRIBER'S TELEGRAPH EQUIPMENT

[Article by V. I. Kor[illegible], [illegible] V. Luk'yanov, B. V. Koro[illegible], [illegible] Yaroslavskiy, and Ye. M. Gromov: "Subscriber's Telegraph Equipment of the AGAT Type"; Moscow, Vestnik Svyazi, Russian, No 8, August 197[illegible], pp 27-30]

In order to organize the transmission of data via a switched telegraph network it is necessary to include a large number of terminal installations for the relay of data to the switching telegraph stations. Since most of such installations will be located in cities, city telephone exchange cable lines will be used to connect them. The complex of subscriber's telegraph equipment of the AGAT type worked out at KONIIS [Kiev Division of the Central Scientific Research Communications Institute] of the USSR Ministry of Communications, will make it possible to utilize practically any number of circuits in city telephone exchange cables for the transmission of data at a speed of up to 200 baud.

New Equipment Developed in the Five-Year Plan

At the present time the transmission of telegraph signals via city telephone exchange subscriber's lines is carried out with the aid of sub-scriber's panels or electronic transition devices of the [illegible] and [illegible]-11 type installed in exchange switchboards. Inasmuch as direct current signals are transmitted from these devices directly to the electromagnet of the telegraph apparatus, sources of high linear voltage of [illegible] volts are used in them with a grounded central point.

Utilization of voltage sources with a grounded central point leads to a decrease in transitional attenuation between the telegraph circuit and other circuits in the cable by 13-17 decibels. As a result of the combination of two factors: high linear voltage and a decrease in transitional attenuation telegraph communication exerts a substantive

GROMOV, YE. S.

Cinematography [illegible]

CRITICISM IN BELORUSSIAN CINEMA INDUSTRY MUST IMPROVE

[Excerpts from BELTA report: "From Positions of Party Principledness"; Minsk, Sovetskaya Belorussia, Russian, 29 April 1972, p 3]

A regular plenum of the Belorussian [illegible] Cinematographic Workers' Union took place in Minsk on 27 April. A. V. Krasinskiy, candidate of art criticism, delivered a report, "On the State and Tasks of Film Criticism in the Light of the 24th [illegible] and of the CPSU Central Committee Resolution 'On Literary and Artistic Criticism'."

Those who spoke noted a certain upsurge in film criticism work in the republic. Recently a "History of the Belorussian Cinema," and a number of books on problems of the artistic and documentary film have been published. Individual theoretical articles on questions of cinematographic [illegible] have appeared in newspapers and journals and new essays have been prepared for publication.

However, the present state of Belorussian film criticism does not meet the lofty requirements of the present day. Its ideological, theoretical, and professional standard is inadequate, and the degree of influence over the creative process in cinematographic art is negligible. The criticism lacks fighting spirit and party purposefulness. The philosophical and esthetic standard of many critical articles in the press is low.

A detailed analysis of cinematographic works is frequently replaced by a recounting of their content and general [illegible]. Articles and reviews are encountered in which the topicality of the theme is treated leniently and artistic criteria are underrated.

Our film criticism at the moment does not pay due attention to the reflection of modern themes in the films. The press is devoid of serious and profound discussion about new artistic and documentary films, and also films for television, treat the theme of the working class -- a theme which must be at the focus of the attention not only of cinematographic [illegible] but also of the critics.

[illegible]

UDC 621.316.542.001.5

USSR

SOLOV'YEV, E. P., Engineer, DOBRUSIN, A. I., Engineer, KERPELEV, S. G., Engineer, GROMOV, YU. I., Engineer, ZAGAYKEVICH, B. D., Engineer

"Electrical Testing of the Material of Insulating Pull Rods for VVB-750m High-Voltage Breakers"

Moscow, Elektrotekhnika, No 8, 1971, pp 46-47

Abstract: Results are presented from testing the electrical properties and moistureproofness of various fiberglass rods obtained by drawing. The superiority of the developed polyester epoxy fiberglass is demonstrated, and this material is recommended for the insulating pull rods of high voltage breakers. Graphs are presented showing the moisture absorption of the new material and the variation of its specific surface drag as functions of time spent in a wet chamber. Comparative data are presented for rods 12 mm in diameter and 50 mm long using PN-1 binder with GF-82GS protective coating and without the coating, fiberglass made of polyester epoxy binder without a coating and with GF-82GS and PKE-22 protective coatings and fiberglass using an epoxy binder manufactured in Poland and presently widely used in 35 kilovolt breakers. The specific surface drag of the Polish fiberglass dropped as much in 24 hours as that of the polyester epoxy fiberglass after a month. Measurements of the electric strengths of the materials after a month in a wet chamber produced the

USSR

SOLOV'YEV, E. P., et al., Elektrotekhnika, No 8, 1971, pp 46-47

following data: for material without a coating 4 kv/cm and with the PKE-22 coating, 3.52 kv/cm.

USSR

UDC 620.191.193

MOROZOVA, I. K., Engineer; GERASIMOV, V. V., Doctor of Technical Sciences; GROMOVA, A. I., Candidate of Technical Sciences; and ZHENIKHOVA, A. V., Engineer

"Dispersed Composition of Corrosion P oducts"

Moscow, Teploenergetika, No 10, Oct 70, pp 72-74

Abstract: The purpose of this work was to study the composition of corrosion products found in water as a function of temperature, pH of the medium, and the oxygen content in it. All tests were conducted under static conditions in an autoclave which had an internal surface made of Kh18l0T steel or steel 20. Test time was 100 hours. Test solutions were neutralized deaerated water, NH_4OH (pH = 10), and HNO_3 (pH = 3). After testing, the solution and deposits were removed with a pipet and the autoclave was washed three times with distilled water.

Results of these tests showed that of the particles measuring less than 0.1 micron onlt 1-2% retain their sizes in the case when the iron is in the ionic form and only 3-6% when

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USSR

MOROZOVA, I. K., et al., Teploenergetika, No 10, Oct 70, pp 72-74

the iron is in the colloidal form. The remaining iron is distributed as follows: from 40 to 80% remains in solution in the form of coarse particles (greater than 10 microns) and 15-33% can be observed in the form of deposits on samples of alloys of titanium, zirconium, and nickel. The remaining iron was deposited on the autoclave walls. The test showed that particles less than 0.1 micron is size, obtained at room temperature, increase in size to larger than 10 microns when placed in a medium with a temperature of 300 C.

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USSR

UDC 620.193:669.296

GROMOVA, A. I., GERASIMOV, V. V., KABANKOVA, N. A., SHUT'KO, I. G., and VOLKHONSKIY, YE. V.

"Corrosion and Electrochemical Behavior of Zirconium-2.5 Percent Niobium Alloy in Water and Steam at High Temperature"

Moscow, Atomnaya Energiya, Vol 29, No 5, Nov 70, pp 364-365

Abstract: A study was made of the corrosion and electrochemical behavior of zirconium-2.5 percent niobium alloy in water of varying composition at 285° C. In a deaerated environment at ~ 300° C the passive region remains up to + 1.8 (NHE). Higher positive potentials are marked by transition to the transpassive region. An increase in the pH of the deaerated environment to 10 (compared to pH = 7) does not intensify corrosion of the alloy during irradiation or outside the reactor. The presence of ammonia (pH= 10) and oxygen in the water at 300° C increases the alloy corrosion rate.

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USSR UDC 621.039.553.3o:o2o.193.47.4

GERASIMOV, V. V., GRONOVA, A. I., LUPAKOV, I. S., MOROZOVA, I. K., BAKULEVSKIY, A. A., BELOUS, V. N., and KOLESOV, B. I.

"Corrosion and Electrochemical Behavior of Carbon Steels Under Quasi-reactor Conditions"

Moscow, Atomnaya Energiya, Vol 28, No 1, Jan 70, pp 13-18

Abstract: The article describes results of a study of the corrosion and electrochemical behavior of steels of the perlitic class in water at 300° C at various oxygen concentrations (0.02-40 and 1000 mg/kg) at pH = 7-10, as well as a study of the effect of reactor irradiation on the corrosion processes of perlitic steels. The corrosion and electrochemical tests were staged under static and dynamic conditions. The perlitic steels studied included St. 20 (C 0.17%; Cr 0.25%; Ni 0.25%; Mn 0.35%; Si 0.17%) ; 12KhM (C 0.12%; Cr 0.94%; Mn 0.59%; Si 0.3%; Mo 0.4%); and 15GNM (C 0.18%; Ni 1.41%; Mn 1.18%; Si 0.23%; Mo 0.26%). Specimens of stainless steel Kh18N10T (C 0.08%; Cr 17÷19%; Ni 9÷11%; Mn 1.2%; Si 0.8%; Ti 0.6%) were comparison-tested.

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USSR

GERASIMOV, V. V., et al., Atomnaya Energiya, Vol 28, No 1, Jan 70, pp 13-18

It was found that in demineralized water at 300° C an increase in the oxygen concentration from 0.02 to 40 mg/l increases the corrosion rate of perlitic steels, with pitting corrosion developing with a pit depth of up to 0.1 mm. In oxygen-containing water under static conditions a complex dependence of anodic process rate on potential is observed in steels of the perlitic class. In demineralized deaerated water an increase in the pH to 10 (by introducing ammonia) results in a decrease in the corrosion rate, with no development of pitting corrosion being observed. Irradiation reduces the corrosion resistance of the steels during the initial testing period. The corrosion rate under irradiation decreases with an increase in exposure time, and after 3500 hours of tests the corrosion rate for the perlitic steels is practically the same with or without irradiation.

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Acc. Nr: AP0042127 Abstracting Service: NUCLEAR SCI. ABST. 4-70 Ref. Code: UR0089

12371 CORROSION AND ELECTROCHEMICAL BEHAVIOR OF CARBON STEELS UNDER CONDITIONS SIMILAR TO THOSE IN REACTOR OPERATION. Gerasimov, V. V.; Gromova, A. I.; Lupakov, I. S.; Morozova, I. K.; Bakulevskii, A. A.; Belous, V. N.; Kolesov, B. I. At. Energ. (USSR): 28: 13-18(Jan 1970). (In Russian).

The corrosion and electrochemical behavior of carbon steels was studied in water at 300°C with oxygen concentrations equal to 0.02 to 40 and 1000 ppM. The samples of carbon steels, irradiated in the reactor and non-irradiated samples were tested under static and dynamic conditions. The increase of oxygen concentration in water intensified corrosion of carbon steels. Irradiation reduced steel corrosion resistance during the initial test period. (auth)

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19760028

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USSR

UDC 620.197.3

GROMOVA, A. I., GERASIMOV, V. V., VRALEV, N. YA., ROZENFEL'D, I. L., and PERSIANTSEVA, V. P.

"Protection of Perlitic Steels Against Corrosion in the Water of Atomic Power Installations"

Moscow, Zashchita Metallov, Vol 6, No 2, Mar-Apr 70, pp 227-231

Abstract: The low stability of perlitic steels at 20-80°C in water saturated with air limits their use in atomic power engineering. This study describes a test in which steel specimens completely immersed in water saturated with air and containing 1 g/l hydrazine or 10% dicyclohexylamine at 20 and 80°C were found to corrode steadily, the corrosion rate being almost two orders of magnitude lower than that in water without inhibiting additions, where the steel had developed pits. Dicyclohexylamine (10%) was found to be more effective than hydrazine for the incomplete immersion of perlitic steel along the water line and above the water. The 10% solution of dicyclohexylamine is radiation-resistant within the reactor spectrum up to the integral dose of 10^{15} n/cm^2 (for thermal neutrons). Tables in the original article show the corrosion of perlitic steels at complete immersion in desalted water saturated with air under static conditions, corrosion

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201020015-8"

USSR

GROMOVA, A. I., et al., Zashchita Metallov, Vol 6, No 2, Mar-Apr 70, pp 227-231

rates of steel at complete immersion in desalted water with hydrazine additions, and corrosion rates of steel in desalted water with various additions, including dicyclohexylamine, hydrazine, octadecylamine, and hexamethyleneamine.

2/2

GROMOVA, E. P.

Control systems (maritime)

SO: JPRS 55353 [illegible]

PROBLEMS OF PLANNING IN AN AUTOMATED CONTROL SYSTEM FOR MARITIME TRANSPORTATION

[Article by Ye. [illegible] Voynadskiy, E. P. Gromova, [illegible] N. F. Serdyuk, [illegible] Sbornik, Moscow, 1971, Referaty Doklady [illegible] Part [illegible], pp [illegible]]

The results of studying the characteristics of the maritime transport economic system are discussed in this paper. The specifics of this system as a planning object are demonstrated, and the basic requirements on the creation of the planning subsystem of the Morflot [Maritime Fleet] Automatic Control System are formulated.

This has permitted establishment of the theoretical principles of functioning of optimal planning and the creation of a procedural base for the development of a set of models, algorithms and planning calculation procedures.

In the most general statement, the planning problem is formulated as finding the most advantageous law of motion of the economic system in a region of the phase space defined by the given resources.

It is proposed that the planning problem in the general statement be studied by means of a model of the [illegible] in order to simulate the behavior of the economic system.

The report contains a description of the models and algorithms of calendar planning of the fleet operation. The general problems of calendar planning are studied, and some new ideas of its improvement are advanced, in particular [illegible] the basis of adaptive automata [illegible] of [illegible] calendar [illegible] optimization of [illegible] are [illegible].

A set of algorithms and programs for calculating the calendar schedule [illegible] of the fleet on a computer is described. It comprises three parts:

Processing the requests for freight transport operations and formation of all possible sections of future schemes for movement of the ships.

Formation of all possible movement schemes for each ship;

UDC 620.182/186

USSR

VINOGRAD, M. I., GROMOVA, G. P.

"Inclusions in Alloyed Steels and Alloys"

Moscow, Vklyucheniya v legirovannykh stalyakh i splavakh, "Metallurgiya" Publishing House, 1971, 216 pp

Abstract: Methods for determining the composition and quantity of nonmetallic inclusions in steel are discussed and recommendations are made for applying these methods for steels smelted by various methods. The formation of oxides, sulfides, and nitrides in steel under various methods of smelting and refining are discussed. Data are presented that characterize the contamination of steel of various new methods by smelting by nonmetallic inclusions. Studies on the effect of nonmetallic inclusions on the hot plasticity of heat-resistant alloys are described. Measures to reduce the contamination of steel by inclusions are considered. The book is intended for scientific and engineering-technical workers of the metallurgical and machine building industries. It contains 98 illustrations, 43 tables, and a bibliography of 229 references.

Table of Contents:

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USSR

VINOGRAD, M. I. and GROMOVA, G. P., Vklyucheniya v legirovannykh stalyakh i splavakh, "Metallurgiya" Publishing House, 1971, 216 pp

USSR

VINOGRAD, M. I. and GROMOVA, G. P., Vklyucheniya v legirovannykh stalyakh i splavakh, "Metallurgiya" Publishing House, 1971, 216 pp

- END -

CSO: 1842-W

3/3

USSR

UDC: 539.163.546.663

VYLOV, Ts., GROMOV, K. Ya., GROMOVA, I. I., ISKHAKOV, G. I., KUZNETSOV, V. V., KUZNETSOVA, M. Ya., POTEMPA, A. V., FOMINYKH, M. I.

"Investigation of the Decay of ^{148}Tb and ^{150}Tb. Part II. $\gamma\gamma$-Coincidence. Decay Schemes of ^{148}Tb and ^{150}Tb"

Moscow, Izvestiya Akademii Nauk SSSR: Seriya Fizicheskaya, Vol 37, No 1, Jan 73, pp 48-52

Abstract: The paper presents studies of $\gamma\gamma$-coincidence spectra of terbium isotopes ^{148}Tb and ^{150}Tb with their decay schemes and a comparison of the analogous excited states of ^{148}Gd and ^{150}Gd nuclei and the neighboring nuclei of samarium and neodymium. If it is assumed that the odd 65-th proton and 83-d (85-th) neutron in the nuclei of ^{148}Tb and ^{150}Tb are on shells $d^{3}/_{2}$ and $f^{7}/_{2}$ respectively, then according to the shell model the ground state of ^{150}Tb has the configuration $\{p(d^{3}/_{2})^{1}n(f^{7}/_{2})^{3}\}$, while that of ^{148}Tb is $\{p(d^{3}/_{2})^{1}n(f^{7}/_{2})^{1}\}$. These configurations allow values of the I^{π}-ground states of these isotopes of 5^-, 4^-, 3^-, and 2^-. From the decay schemes of these nuclei and the values of log ft, it may be concluded that the spin and parity of the ground states of these isotopes must be 2^-.

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1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ALPHA DECAY OF PRIME211 RN AND PRIME212 RN -U-

AUTHOR-(05)-AFANASYEV, V.P., BOCHVAROVA, M., GOLOVKOV, N.A., GROMOVA, I.I., IVANOV, I.I.

COUNTRY OF INFO--USSR

SOURCE--LAB. OF NUCLEAR PROBLEMS. 1970. 11P. DEP. CFSTI

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS

TOPIC TAGS--ALPHA DECAY, SPECTROGRAPH, RADON ISOTOPE, POLONIUM ISOTOPE, RADIOACTIVE DECAY, ASTATINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/0174 STEP NO--UR/0000/70/000/000/0011/0011

CIRC ACCESSION NO--AT0127798
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AT0127798
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ALPHA DECAY OF PRIME211 RN AND PRIME212 RN WAS INVESTIGATED USING THE MAGNETIC SPECTROGRAPH. BESIDES THE KNOWN ALPHA TRANSITIONS OF PRIME211 RN (5850 KEV (1), 5783 KEV (1.84), 5616 KEV (0.08)) THERE WERE OBSERVED THE NEW ONES: 5466 KEV (2 TIMES 10 PRIME NEGATIVE4), 5276 KEV (4.4 TIMES 10 PRIME NEGATIVE4, 5179 KEV (6 TIMES 10 PRIME NEGATIVE5) 5055 KEV (2 TIMES 10 PRIME NEGATIVE5). THE HINDRANCE FACTORS ARE PRESENTED. NEW LEVELS: 391.4 EKV, 585 KEV, 684 KEV ARE INTRODUCED FOR THE PRIME207 PO NUCLEUS. FOR PRIME212 RN THE 5588 KEV (5 TIMES 10 PRIME NEGATIVE4) ALPHA TRANSITION TO THE 687 KEV LEVEL OF PRIME208 PO, WAS OBSERVED. THE PARTS OF ALPHA DECAY OF PRIME211 AT, PRIME211 RN AND PRIME207 PO (41.3 PLUS OR MINUS 1.3PERCENT AND 0.028 PLUS OR MINUS 0.003PERCENT) ARE ESTIMATED. FACILITY: JOINT INST. FOR NUCLEAR RESEARCH, DUBNA USSR.

UNCLASSIFIED

1/2 005 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--ON AREA THEOREMS FOR NON OVERLAPPING FINITELY CONNECTED DOMAINS, II
-U-
AUTHOR-(02)-GRUNOVA, L.L., LEBEDEV, N.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 1, MATEMATIKA, MEKHANIKA, ASTRONOMIYA, 1970, NR 1, PP 18-29
DATE PUBLISHED-------70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--TOPOLOGY, MATHEMATIC SPACE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/0379 STEP NO--UR/0043/70/000/000/0018/0029

CIRC ACCESSION NO--AP0055164
UNCLASSIFIED

2/2 005 UNCLASSIFIED PROCESSING DATE--09OCT70
CIRC ACCESSION NO--AP0055164
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME APPLICATIONS ARE GIVEN OF GENERALIZED AREA THEOREMS FOR NON OVERLAPPING FINITELY CONNECTED DOMAINS WHICH WERE PROVED IN PART ONE OF THE PAPER (1).

UNCLASSIFIED

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USSR UDC 616.988.75+616.2-036.11-022.6]-097.3

SHADRIN, A. S., [illegible], A. A., MALYSHEVA, A. M., NAYKHIN, A. N., GROMOVA, M. I., RUMEL', N. B., and SMORODINTSEV, A. A., All-Union Scientific Research Institute of Influenza, Leningrad

"The Effect of Serum Antiviral Inhibitors on Resistance to Influenza and Acute Respiratory Diseases"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 582-586

Abstract: A study conducted on about 1000 men, women, and children living in Leningrad and Murmansk and on 129 volunteers revealed that the presence of beta-inhibitors in the blood significantly reduces the proportion of clinically severe forms of influenza and parainfluenza (a fall by a factor of 2.5), decreases the frequency of severe forms of experimental influenza (down by a factor of 2), and slows the development of immune response to vaccination with highly attenuated influenza strains. Beta-inhibitors do not exert an anti-infectious effect, that is, they do not prevent contraction of the diseases. Their protective value stems from their antitoxic effect, that is, reduction of the severity of influenza and parainfluenza without hindering the body's specific reaction to the infection.

1/1

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--PREPARING HARDENED THIN FILMS FROM THERMOSETTING POLYMERS -U-

AUTHOR-(04)-GARANINA, S.D., GROMOVA, M.V., KOROLEV, A.YA., ZHERDEY, YU.V.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (3), 61

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMOSETTING MATERIAL, PLASTIC FILM, FLUOROCARBON RESIN, EPOXY RESIN, POLYESTER RESIN, PLASTIC FABRICATION/(U)FLUOROPLASTY FLUORINE PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0581 STEP NO--UR/0191/70/000/003/0061/0061

CIRC ACCESSION NO--AP0119499
UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AP0119499
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIN FILMS FROM THERMOSETTING POLYMERS (I) WERE PREPD. BY PRESSING I SAMPELS IN A COLLAPSIBLE FTOROPLAST-4 CONTAINER. THE METHOD WAS SUITABLE FOR I WHICH DID NTO LIBERATE LARGE AMTS. OF VOLATILE COMPDS. DURING HARDENING (E.G., EPOXY RESINS, POLYESTERS, AND OTHERS).

UNCLASSIFIED

USSR

UDC 576.851.48.095.14

GROMOVA, T. G., and MOROZ, A. F., Department of Infection Pathology and Experimental Therapy of Infections, Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR, Moscow

"The Effect of the R-Factor on the Sensitivity of E. coli Cells to Ultraviolet and Gamma Irradiation"

Moscow, Antibiotiki, No 11, 1971, pp 995-998

Abstract: The extrachromosomal genetic resistance factor R was transferred from donor cells to E. coli by the conjugation method. The recipient cells were irradiated with gamma rays in doses of 2.5, 5, 10, or 20 Krad or with ultraviolet light for 2.3, 5, 7.5, 10, 12.5, or 15 min and were subsequently grown on agar for 18 hours at 37°C. Recipient cells were resistant to nalidixic acid. The number of colonies was counted, and the results were plotted as survival curves. Only one E. coli strain out of eight became somewhat more resistant to ultraviolet light than the controls. A protective effect with respect to gamma rays was observed in two out of eight recipient strains. Since the survival curves of the recipient cells with increased resistance and of the controls have different slopes but identical "shoulders," it is concluded that the R+ cells have a greater recovery capacity.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201020015-8"

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ODORIFEROUS SUBSTANCES OF HYDROGENATED FATS -U-

AUTHOR-(05)-LOPATIN, B.V., SHMIDT, A.A., ZATULOVSKAYA, K.F.,
KONCHALOVSKAYA, M.YE., GROMOVICH, YU.I.

COUNTRY OF INFO--USSR

SOURCE--MASLO-ZHIR. PROM. 1970, 36(2), 13-18

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--IR SPECTRUM, UV SPECTRUM, CARBONYL COMPOUND, HYDROGENATION, VEGETABLE OIL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0537 STEP NO--UR/9065/70/036/002/0013/0018

CIRC ACCESSION NO--AP0119456
UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119456

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COMPLEX MIXT. OF ODORIFEROUS SUBSTANCES OF HYDROGENATED FATS WAS SEPD. FROM FATS BY MOL. DISTN. IN LAB. EQUIPMENT AND ANALYZED BY SPECTROPHOTOMETRY WITHOUT SEPN. OF THE MIXTS. INTO FRACTIONS. THIS SIMPLIFIED METHOD GAVE SATISFACTORY RESULTS. PRODUCTION DEODORIZING OF HYDROGENATED SUNFLOWER OIL MADE BY A BATCH OR CONTINUOUS METHOD SHOWED THAT IN CONTINUOUS PROCESSING, UNSATD. CARBONYLS WERE REMOVED MORE EFFECTIVELY THAN IN BATCH PROCESSING. THE IR AND UV SPECTRA OF THE PRODUCTS INVESTIGATED SHOW THAT CONTINUOUS DEODORIZING REMOVES UNSATD. CARBONYL COMPDS. MORE COMPLETELY.

FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

USSR

GROMOZDOV, G.

"The Marvelous Chlorella"

Moscow, Krasnaya Zvezda, 7 Jun 73, p 4

Abstract: Chlorellae attracted the attention of scientists because of their capacity to take up CO_2 at a high rate and to evolve O_2. This gave rise to the idea that they can be used to maintain a normal atmosphere on space vehicles. In addition to this, chlorellae have many other interesting properties. They contain 15 vitamins, including A, C, those of the B group, folic and panthothenic acids, choline, E, K, H (biotin), and provitamin D. The content of vitamin A is higher than in alfalfa and that of vitamin C equal to that in lemons. The nutritive value of chlorellae is not inferior to that of meat and exceeds that of wheat. Chlorellae have a 50% protein content and contain almost all essential amino acids such as methionine, cystine, and tryptophan which are not synthesized in the organism. The ratio of these amino acids is approximately the same as in meat or fish. The problem of utilizing the nutrient qualities of chlorellae is being studied at the Laboratory of Aquatic Cultures, Division of Microbiology of the Academy of Sciences Uzbek SSR, and also by Czechoslovak scientists. At the Uzbek Scientific Research Institute of Animal Husbandry, an

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USSR

GROMOZDOV, G., Krasnaya Zvezda, 7 Jun 73, p 4

installation has been created for the cultivation of chlorellae throughout the year. It has been estimated that 50 tons of chlorellae suspension per day are adequate for feeding 5000 cattle or 12-15 thousand hogs. At restaurants of the Czechoslovak town Budejovice one is offered 200 dishes containing algae ingredients. Products derived from chlorellae are added to mayonnaise, cottage cheese, and other foodstuffs. Chlorellae act as biostimulants. They can be used for the treatment of liquid effluents, in which they develop O_2 and also kill E. coli. The medicinal properties of chlorellae are being studied. The USSR professor N. S. Gayevskaya is of the opinion that 100 g chlorella are sufficient for satisfying the daily vitamin requirements of a human. At one of the USSR health resorts a bandage of curative algae is used to treat severe cases of skin diseases. In Czechoslovaka there is a special pharmacy which distributes medicines derived from the biomass of chlorellae. It was established by Czechoslovak scientists that preparations from these algae expedite the healing of wounds. An ointment derived from chlorellae is effective in the treatment of burns, inflammations, and eczema. A substance isolated from chlorellae can be used for the synthesis of cortisone. The Bulgian journal "Technique

USSR

GROMOZDOV, G., Krasnaya Zvezda, 7 Jun 73, p 4

Nouvelle" reported on the use of algae for obtaining antibiotics and the successful therapy of typhoid and paratyphoid with these antibiotics. Polish scientists isolated two species of green algae the antibiotic properties of which are particularly pronounced.

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UNCLASSIFIED PROCESSING DATE--20NOV70

1/3 025

TITLE--ELECTROPHYSIOLOGICAL DATA ON INTERACTION OF APPRECIATED AND UNAPPRECIATED TRACE PROCESSES IN MAN IN ONTOGENESIS -U-

AUTHOR-(04)-VORONIN, L.G., KONOVALOV, V.F., GROMYKO, M.M., SERIKOV, I.S.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 2, PP 431-440

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROPHYSIOLOGY, EEG, MEMORY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0247/70/020/002/0431/0440

PROXY REEL/FRAME--3005/0352

CIRC ACCESSION NO--AP0132585

UNCLASSIFIED

2/3 025 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132585

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF THE DYNAMICS OF FORMATION AND INTERACTION OF TRACE PROCESSES IN CHILDREN AGED FROM FOUR TO SIXTEEN YEARS. IN THE FIRST SERIES OF EXPERIMENTS THE SUBJECT WAS INSTRUCTED TO OPEN HIS EYES AND PRESS THE BUTTON ONLY WHEN THE LIGHT WAS TURNED ON; IN THE SECOND SERIES, HE WAS TO REPRODUCE THE OPERATION AT THE MOMENT WHEN THE LIGHT WAS DUE TO BE SWITCHED ON; IN THE THIRD SERIES, HE WAS TO ACT BEFORE THE SWITCHING ON OF THE LIGHT. FORMATION OF TRACE REACTIONS WAS ACHIEVED WITHOUT DIFFICULTY IN THE SUBJECTS OF ALL AGE GROUPS. EEG REACTIONS, SGR, OCULO MOTOR AND MOTOR REACTIONS APPEARED BEFORE THE LIGHT WAS TURNED ON ALREADY IN THE FIRST EXPERIMENT. BY THE SECOND TO THIRD EXPERIMENT, THEY WERE STABILIZED AND COULD APPEAR IN 80-90PERCENT OF THE TRIALS. WHEN A CONSCIOUS EVALUATIONS OF THE TRACE PAUSE WAS DUE (SECOND SERIES OF EXPERIMENTS) THE MOMENT OF THE APPEARANCE OF THE LIGHT WAS UNDERESTIMATED IN MOST OF THE CASES. IN THE THIRD SERIES OF EXPERIMENTS, WHEN THE SUBJECTS WERE TRYING TO ACT BEFORE THE LIGHT WAS SWITCHED ON, UNDERESTIMATION OF THE TIME WAS RECORDED ONLY IN CHILDREN OF FOUR TO EIGHT YEARS OLD. THE 14 TO 16 YEAR OLD SUBJECTS EXACTLY EVALUATED THE INTERVAL BY COUNTING. HOWEVER, IN SPITE OF THESE UNDER AND OVER ESTIMATES, THE EEG RESPONSES SGR AND OTHER REACTIONS APPEARED AT THE POINT OF THE ACTION OF THE SIGNAL (WHEN IT WAS OMMITTED) OR BEFORE ITS SWITCHING ON. A CONCLUSION IS DRAWN THAT TRACE PROCESSES IN FOUR TO EIGHT YEAR OLD CHILDREN ARE FORMED MAINLY AT THE LEVEL OF THE FIRST SIGNAL SYSTEM, AND IN 14 TO 16 YEAR OLD SUBJECTS, AT THE LEVEL OF BOTH SIGNAL SYSTEMS.

UNCLASSIFIED

3/3 025 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0132585
ABSTRACT/EXTRACT--FACILITY: DEPARTMENT OF MEMORY PROBLEMS, INSTITUTE OF BIOPHYSICS, USSR ACADEMY OF SCIENCES, PUSCHINO-ON-OKA.

UNCLASSIFIED

UDC 620.178.53

USSR

GRIGOR'YEV, YE. T., and GRONSKIY, V. I.

"The Reaction of a Mechanical System to a Random Effect"

Kiev, Prikladnaya Mechanika, Vol 9, No 1, Jan 73, pp 105-109

Abstract: There is shown the incorrect nature of the problem of calculation of the spectral density of a reaction on the basis of the spectral density of the effect and the frequency characteristic of the mechanical system with account taken of the errors that are unavoidable in engineering practice, or the finiteness of the value of the resolving power of spectral analysis. The problem of determination of the spectral density (or dispersion) of the reaction of a mechanical system on the basis of spectral density (or dispersion) of the input effect is incorrect in the sense that a considerable change of the spectral density and of the total dispersion of the reaction of the system can correspond to a small change of the spectral density of the input effect, which is within the limits of the errors of its evaluation.

In any random process, including "white noise," there are sharp changes of phase of the narrow-band components. Care should be taken in realization of the methods for utilizing the reactions of a system to "white noise" or

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USSR

GRIGOR'YEV, YE. T., and GRONSKIY, V. I. , Prikladnaya Mekhanika, Vol 9, No 1, Jan 73, pp 105-109

some other random effect to obtain dynamic characteristics, and for determining the frequencies, shapes, and decrements of the oscillations of mechanical designs. 3 figures, 4 references.

2/2

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--PRODUCTION OF REFRACTORIES -U-

AUTHOR-(03)-ANDREYEVA, N.A., GROPYANOV, V.M., KOZLOVSKIY, L.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 267,434

REFERENCE--OTKRYTTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--01APR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL PATENT, ROASTING FURNACE, VACUUM TECHNIQUE, ZIRCONIUM OXIDE, REFRACTORY PRODUCT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1781 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0132047

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0132047

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REFRACTORIES WERE PRODUCED BY MOLDING ZRO SUB2 INTERMEDIATES, ROASTING THEM IN VACUO, AND COOLING THEM. TO PRESERVE THE HIGH PURITY AND D. OF THE REFRACTORIES, ROASTING TOOK PLACE IN A VACUUM GREATER THAN OR EQUAL TO 5 TIMES 10 PRIMENEGATIVE4 TORR AT GREATER THAN OR EQUAL TO 2500DEGREESK FOR GREATER THAN OR EQUAL TO 1 HR AND COOLING TOOK PLACE AT A RATE OF 800-5000EGREES-MIN. FACILITY: LENSOVET TECHNOLOGICAL INSTITUTE, LENINGRAD AND ALL UNION INSTITUTE OF REFRACTORY MATERIALS.

UNCLASSIFIED

UDC 632.95

USSR

STOYANOVICH, F. M., KARPENKO, R. G., GRORUSHKINA, G. I., GOL'DFARB, YA. L.,
Institute of Organic Chemistry imeni N. D. Zelinskiy

"A Method of making Dibenzothiophene Derivatives"

USSR Author's Certificate No 349692, filed 13 Aug 70, published 6 Sep 72
(from RZh-Khimiya, No 10, May 73, Abstract No 10N621P by T. G. Chekareva)

Translation: Dibenzothiophene derivatives, which are of interest as herbicides and insecticides, and can also be used as intermediates in organic synthesis, are synthesized by cyclizing 2-tert-Bu-2'-diphenylsulfinic acids or their halides in the presence of acid catalysts at 0-200°C. Cyclization takes place with splitting of the tert-butyl group. Example: 1 g of 2--tert-Bu-2'-diphenylsulfinic acid (I) and 10 ml of $SOCl_2$ are boiled for 2 hours, the excess $SOCl_2$ is driven off in a vacuum, the residue is dissolved in 20 ml of $C_2H_4Cl_2$ and 0.5 g of anhydrous $AlCl_3$ is added at 0°C with agitation for 20 minutes at that temperature, which is then raised to about 20°C, and the resultant reaction mass is allowed to stand for about 12 hours. The mixture is then poured into water, the organic layer is removed, washed in a 5% solution of NaOH, in water, and dried. After eliminating the solvent, the

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USSR

STOYANOVICH, F. M., et al., USSR Author's Certificate No 349692, filed 13 Aug 70, published 6 Sep 72

result is 0.4 g of dibensothiophen-5-oxide, melting point 185-7°C (dilute alcohol). A similar process is used to synthesize dibenzothiophen-5-oxide-1-carboxylic acid, melting point 235-7°C (alcohol). 0.95 g of I is heated with boiling in 10 ml of Ac_2O. The anhydride is driven off in a vacuum, and the residue is treated with hexane. After evaporating the solvent, the residue is distilled in a vacuum at 150°C/0.1 mm; the sublimate is dissolved in 5 ml of hot alcohol, the solution is filtered, evaporated to 2 ml, and cooled. The residue contains dibenzothiophene with a melting point of 98.5-9.5°C. A similar procedure gives dibenzothiophene-1-carboxylic acid with a melting point of 176-7°C (hexane-benzene), methyl ether, melting point 68-9°C.

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USSR

UDC 576.851.46.095.162

MAKSIMOVA, Z. Ya., and GROSHEV, A. G., Moscow Institute of Vaccines and Sera imeni Mechnikov

"Lyophilization of H. Pertussis. Report I. A Study of the Resistance of H. Pertussis to Lyophilization"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 11, 1971, pp 150-151

Abstract: Twenty standard and industrial strains of H. pertussis were frozen at -50°C, vacuum-dried for 24 hrs, and stored in sealed ampules at 5, 18, 36, and -35°C. After various periods, the samples were analyzed for survival, morphological and serological properties, virulence, and immunogenicity. After lyophilization in physiological saline, only 3.7% of the cells survived. In a medium composed of 10% sucrose and 1% gelatin, the survival rate was 55.9%. Most cells, 27-66%, died during the first 1-3 months of storage. Subsequently, the death rate decreased considerably, especially at low storage temperatures. At the end of 18 months, all investigated biological properties of the surviving cells were identical with control values. It is concluded that H. pertussis is highly resistant to lyophilization and that this method yields effective dry cultures.

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USSR

UDC 621.375.121

ALEKSEYEV, O. V., GROSHEV, G. A., Active Members of the Scientific and Technical Society of Radio Engineering, Electronics and Communications

"Wide-Band Power Amplifiers With Separate Amplification in Adjacent Wave Bands"

Moscow, Radiotekhnika, Vol. 26, No 5, May 71, pp 73-78

Abstract: The authors discuss power relationships and design modifications of power amplifiers based on the method of separate band amplification. The principle on which the separate amplification circuit is based involves using a number of amplification channels (separate amplification elements, single-stage or multistage amplifiers) with continuously overlapping frequency responses in a predetermined band so that only one channel amplifies on each frequency (ignoring the region of overlap). Among the advantages of the proposed circuit design are the possibility of filtering higher harmonics without commutation of filters, the possibility for separate correction of the resultant frequency response for different sections of the amplification range of the individual channels, and simplified direct tuning of the amplification part of the device since the bands of the individual channels are narrow compared with the width of the entire range. Studies indicate that the proposed design has

USSR

ALEKSEYEV, O. V., et al, Radiotekhnika, Vol. 26, No 5, May 71, pp 73-78

great promise for use in wide-band amplifiers for a high power level, making it possible to solve a number of technical problems which cannot be solved with conventional amplifiers, such as filtering higher harmonics without switching octave filters. Amplifiers with separate band amplification can be used for wide-band amplification in the UHF range in a band of several hundred megaherz, and may be especially useful for simultaneous amplification of several signals with strongly differing frequencies.

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UDC 669.71.053.2(088.8)

USSR

GROSHEV, G. L., DANOV, S. M., YURLOVA, Z. I., SHILOVA, A. V., CHAUSOVSKIY, D. A., MOVSHEVICH, Yu. M., and SHAROV, A. V.

"Method of Producing Anhydrous Aluminum Chloride"

USSR Author's Certificate No 268397, Filed 8/04/68, Published 13/07/70 (Translated from Referativnyy Zhurnal-Metallurgiya, No 2, 1971, Abstract No 2 G132 P)

Translation: A method is presented for producing anhydrous $AlCl_3$ from Na tetrachloroaluminate at elevated temperatures. To simplify the process, the Na tetrachloroaluminate is treated with gaseous NH_3, the ammoniates formed are evaporated and condensed, and metallic Al is added to them with subsequent heating to 800-850° in a medium of an inert gas such as N_2.

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1/2 013 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--ALUMINUM CHLORIDE MOLYBDAMMONIATE AS A CATALYST FOR THE HYDROCHLORINATION OF ALUMINUM IN A MELT -U-

AUTHOR-(04)-YEFEOVA, Z.I., GROSHEV, G.I., DANOV, S.M., SHILOVA, A.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 894-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALUMINUM CHLORIDE, CATALYST, CHLORINATION, ALUMINUM, CATALYST ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0949 STEP NO--UR/0080/70/043/004/0894/0896

CIRC ACCESSION NO--AP0124939

UNCLASSIFIED PROCESSING DATE--[illegible]

2/2 013

CIRC ACCESSION NO--AP0131534

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FEASIBILITY OF INCREASING THE SPEED OF HYDROCHLORINATION OF AL IN A MELT BY USING THE ALMONOAMMONIATE OF ALCL SUB3 AS A HCL ACCEPTOR WAS STUDIED. THE CATALYTIC ACTIVITY OF THE MONOAMMONIATE WAS ATTRIBUTED TO THE FORMATION OF A COMPLEX WITH HCL CONTG. UP TO 3 MOLES OF HCL PER MOLE OF MONOAMMONIATE.

UNCLASSIFIED

1/2 006 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PREPARATION OF ANHYDROUS ALUMINUM CHLORIDE BY THE HYDROCHLORINATION OF ALUMINUM IN A SALT MELT -U-
AUTHOR--GROSHEV, G.L.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(3), 187-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHLORINATION, ALUMINUM CHLORIDE, FUSED SALT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0425 STEP NO--UR/0064/70/046/003/0187/0189

CIRC ACCESSION NO--AP0124176

UNCLASSIFIED

2/2 006 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124176

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANHYD. ALCL SUB3 WAS PREPD. BY TREATMENT OF METALLIC AL WITH GASEOUS HCL IN A LICL 70 MOLE PERCENT ALCL SUB3 MELT (CONTG. 5PERCENT FECL SUB3) AT 180-250DEGREES; THE DEGREE OF CONVERSION OF THE AL REACHED 89PERCENT AFTER 180 MIN. THE USE OF NACL ALCL SUB3 OR KCL ALCL SUB3 MELTS RESULTED IN LOWER DEGREES OF CONVERSION; IN ADDN. TO FECL SUB3, SOME OTHER CHLORIDES (FECL SUB2, ZNCL SUB2, NICL SUB2, AND CU SUB2 CL SUB2, BUT NOT PB CHLORIDE) ALSO ACCELERATED THE CONVERSION. THE APPARENT ENERGY OF ACTIVATION OF THE REACTION WAS 11 KCAL-G ATOM AL.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--090CT70

TITLE--TEMPERATURE PROFILES AND MOISTURE CONTENT OF SALT SOLUTIONS DURING THEIR DEHYDRATION IN AN ALL PURPOSE FLUIDIZED BED APPARATUS -U-

AUTHOR-(03)-SOKOLOVSKIY, A.A., GROSHEV, G.L., DANOV, S.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINOSIR, 1970, (3), 12-14

DATE PUBLISHED--------70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, CHEMISTRY

TOPIC TAGS--AQUEOUS SOLUTION, FLUIDIZED BED, AMMONIUM SULFATE, DEHYDRATION, DRYING OVEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1451 STEP NO--UR/0314/70/000/003/0012/0014

CIRC ACCESSION NO--AP0109511

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--09OCT70

2/2 007

CIRC ACCESSION NO--AP0109511

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPRAY ATOMIZATION (TOP) AND FLUIDIZATION (BOTTOM) DRYING STUDIES WERE CONDUCTED ON (NH SUB4) SUB2 SO SUB4 CONTG. SMALLER THAN 40PERCENT WATER AT HEAT TRANSFER MEDIA (GAS) TEMPS., 320-760DEGREES AT THE NOZZLES TEMP., AND 18-22 M-SEC FLOWS. TEMP. PROFILES WERE DETD. FOR BEDS SMALLER THAN 320 MM DEEP AND THE TOP AND BOTTOM JET ENVELOPES BOTH IN RADIAL AND LONGITUDINAL DIRECTIONS; AN EQUATION IS GIVEN FOR CALCG. JET ENVELOPE TEMPS. SHARP TEMP. DROPS WERE OBSD. IN THE JET ENVELOPE; THE TEMPS. WERE NEARLY CONST. AT 100 MM FROM THE NOZZLES. (NH SUB4) SUB2 SO SUB4 WAS DRIED TO MOISTURE CONTENTS OF 0.15 0.52PERCENT WITH EXIT GASES CONTG. 16-30PERCENT MOISTURE. THE DRYING EFFICIENCY WAS CONTROLLED BY TOP CONDITIONS AND ONLY IN THE EVAPN. AND GRANULATION OF THERMALLY UNSTABLE AND NONHYGROSCOPIC MATERIALS WERE THE BOTTOM CONDITIONS IMPORTANT.

UNCLASSIFIED

USSR

UDC: 621.383.8.029.65

GROSHEV, I. N., FUKS, L. B., YARESHKO, Yu. P., YASHCHISHIN, P. I.

"Limiting Energy Efficiency of Microwave Scanning Radio Image Converters"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 4, Apr 72, pp 894-896

Abstract: The authors consider semiconductor radio image converters in the millimeter wave band designed for obtaining images of objects in fog. The radio image of the object in the focal plane of an optical type antenna is scanned by localized control of the conductivity of a semiconductor plate which is also located in the focal plane of the antenna. An analysis of the energy efficiency of such a scanning image converter shows that the power transmission factor is equal to -20 or -30 dB or less regardless of the design of the equipment.

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USSR

UDC: 539.144.3

GROSHEV, L. V., GOVOR, L. I., DEMIDOV, A. M., Institute of Atomic Energy imeni I. V. Kurchatov

"De-excitation of Even-Odd Germanium Nuclei After Capture of Thermal Neutrons"

Moscow, Izv. AN SSSR, Ser. Fiz., Mat. XXII Yezhegod. soveshch. po yadern. spektroskopii i strukture atom. yadra, Kiev, 25-28 yanv. 1972, Vol 36, No 4, Apr 72, pp 833-841

Abstract: The paper presents the results of measurement of the gamma spectra of radiation capture of thermal neutrons by germanium isotopes with atomic numbers of 70, 72, 74, and 76. The measurements were done on the IRT-M reactor at the Atomic Energy Institute imeni Kurchatov, using artificial quartz and bismuth filters. AI-2048 and AI-4096 analyzers were used. The results are tabulated and compared with data in the literature. The energy-level diagrams of the four isotopes are given. Three figures, five tables, bibliography of thirteen titles.

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USSR

GROSHEV, L. V.; DEMIDOV, A. M.; SOKOLOVSKIY, L.L. (Kurchatov Institute of Atomic Energy)

"The De-Excitation of Even-Odd Nuclei over the Range $91 \leq N \leq 113$ after Capturing Thermal Neutrons"

Moscow, Yadernaya Fizika; September, 1972; pp 441-6

ABSTRACT: The peculiarities of the decay of a capturing state for even-odd deformed nuclei with the number of neutrons from 91 up to 113 are discussed. The effect of the characteristics of the Nilsson orbit of the final state as well as the "particlicity" or "holicity" of this state on the probability of E1-transition from a capturing state is noted. The maxima of the integral intensity of the high-energy part of the spectrum were found for atomic weights near 165 and 185.

The article includes three tables: "Probabilities of E1-Transitions from the Initial State for Nuclei with $91 \leq N \leq 113$"; "Ratio of Probabilities of Transitions to Various Nilsson States"; and "Ratio of Probabilities of Transitions into the State $1/2^-$ to Transitions into the State $3/2^-$ within One Rotational Band"; and a graph showing the dependence of the integral intensity of the high-energy part of the spectrum, the full radiation width, and the strength function of s-neutrons on the atomic weight. There are 24 bibliographic references.

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USSR

GROSHEV, L. V., DEMIDOV, A. M., LEONOV, V. F., SOKOLOVSKIY, L. L., Institute of Atomic Energy imeni I. V. Kurchatov

"γ-Ray Spectrum From (n, γ)-Reactions in Sm^{150} and Sm^{151} Samples"

Moscow, Yadernaya Fizika, Vol. 13, No. 4, Apr 71, pp 681-687

Abstract: The γ-spectra for the radiation capture of thermal neutrons by Sm^{150} nuclei and Sm^{151} radioactive nuclei were measured with a single-crystal Ge(Li) gamma-spectrometer. It is noted that in elements with even Z in the range of atomic weights from 90 to 200, isotopes with odd A as a rule have the greatest thermal neutron capture cross section. The cross section of some of these isotopes is so great that a purity of the sample greater than 99.99% is necessary to eliminate the considerable contribution from these. Since there is great difficulty in obtaining samples of such high purity in electromagnetic methods of isotope separation, this study used the method of burning out admixture isotopes having an anomalously high capture cross section for thermal neutrons to obtain isotopes of the required purity. The necessary Sm^{149} purity was obtained by burning out

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USSR

GROSHEV, L. V., et al, Yadernaya fizika, Vol. 13, No. 4, Apr 71, pp 681-687

Sm^{149} in an integral neutron flux, $2.2 \cdot 10^{20}$ neutron/cm^2. The following neutron binding energies were obtained: 5596 ± 1 kev in Sm^{151} and 8258 ± 1 kev in Sm^{153}, the two isotopes which make the greatest contribution to the gamma-spectrum. Diagrams of the gamma-transitions for Sm^{151} and Sm^{152} are given. It is noted that gamma-quanta release of Sm^{151} nuclei is of interest, since the nucleus is on the boundary of the transition region from spherical to elongated nuclei. It is then possible to compare the gamma-spectra of Sm^{151} and Sm^{153}, which have a number of neutrons equal to 89 and 91 respectively. This problem will be considered in detail by the authors after measurements of the gamma spectrum of Sm^{155}.

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USSR

GROSHEV, L. V., GOVOR, L. I., DEMIDOV, A. M., and RAKHMOV, A. S., Institute of Atomic Energy Imeni I. V. Kurchatov

"Spectra of Gamma-Rays and Schematics of Xe^{130} and Xe^{132} Levels from the Reaction (n, γ)"

Moscow, Yadernaya Fizika, Vol 13, No 6, Jun 71, pp 1129-1134

Abstract: Using a spectrometer with a Ge(Li)-detector, the authors measure gamma rays arising during the capture of heated neutrons in a natural mixture of xenon isotopes and a sample enriched with Xe^{129}. They determine the energies and intensities of the gamma lines extracted from the spectra. On the basis of the data obtained they compile schematics of the gamma transitions of even-even Xe^{130} and Xe^{132} nuclei to levels lying below approximately 4.5 MeV. Unlike previous spectrometers, the one described in this article permits detecting a greater number of intense gamma rays. Solid XeF_2 and $Xe^{129}F_2$ were used as the target. A table is given showing the isotopic composition of an Xe^{129} sample. Two schematics are included showing the gamma transitions of the Xe^{130} and Xe^{132} nuclei. In separate sections the authors describe these schematics in detail and discuss previous research in the same field. The article contains one table, two figures, and a bibliography of 12 titles.

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1/2 031 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--THE DE-EXCITATION OF EVEN ODD NUCLEI NEAR THE MAGIC NUBMER N EQUALS 82 AFTER THERMAL NEUTRON CAPTURE -U-

AUTHOR-(04)-GROSHEV, L.V., DVORETSKIY, V.N., DEMIDOV, A.M., ALVASH, M.S.

COUNTRY OF INFO--USSR

SOURCE--LA-TR-69-29, FROM REPORT IAE-1780. 13P. DEP. CFSTI

DATE PUBLISHED-------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, MATERIALS

TOPIC TAGS--ISOTOPE, BARIUM, CERIUM, NEODYMIUM, NEUTRON CAPTURE, SPECTROSCOPIC ANALYSIS, GAMMA IRRADIATION, THERMAL NEUTRON, LITHIUM, GERMANIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0796 STEP NO--UR/0000/70/000/000/0013/0013

CIRC ACCESSION NO--AT0131390

UNCLASSIFIED

2/2 031 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0131390

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WITH AN EXTERNAL BEAM OF THERMAL NEUTRONS, THE GAMMA RAY SPECTRA OF EVEN ODD NUCLEI OF BARIUM (PRIME135 BA, PRIME137 BA, PRIME139 BA) AND CERIUM (PRIME139 CE, PRIME141 CE, PRIME143 CE) WERE MEASURED WITH THE HELP OF A SINGLE CRYSTAL GE(LI) SPECTROMETER. THE SPECTRA OBTAINED TOGETHER WITH THE GAMMA RAY SPECTRA OF ODD NEODYMIUM NUCLEI MADE IT POSSIBLE TO DISCOVER CERTAIN REGULARITIES IN THE DE-EXCITATION OF EVEN ODD NUCLEI WITH NEUTRON NUMBERS N EQUALS 79, 81, 83, AND 85, TESTIFYING TO DIRECT THERMAL NEUTRON CAPTURE BY EVEN ODD NUCLEI IN THE NEIGHBORHOOD OF THE MAGIC NUMBER N EQUALS 82. FACILITY: AKADEMIYA NAUK SSSR, MOSCOW. INSTITUT ATOMNOI ENERGII.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--LEVEL SCHEMES FOR BARIUM 136 AND BARIUM 138 FROM N, GAMMA REACTIONS -U-

AUTHOR-(04)-GROSHEV, L.V., DVORETSKIY, V.N., DEMIDOV, A.M., RAKHIMOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(4), 768-76

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS

TOPIC TAGS--GAMMA SPECTRUM, BARIUM ISOTOPE, THERMAL NEUTRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/2029 STEP NO--UR/0048/70/034/004/0768/0776

CIRC ACCESSION NO--AP0138883

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0138883

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A BA TARGET ENRICHED IN PRIME135 BA AND PRIME137 BA, WAS IRRADIATED WITH THERMAL N, AND GAMMA SPECTRA WERE MEASURED WITH GE(LI) DETECTORS. THE ENERGY AND RELATIVE INTENSITY OF 74 GAMMA LINES FROM THE NATURAL MIXT., PRIME136 BA, AND PRIME138 BA ARE TABULATED. SCHEMES OF ENERGY LEVELS AND TRANSITIONS FOR BOTH NUCLIDES ARE INTERPRETED AND SUMMARIZED IN DECAY SCHEMES.

FACILITY: INST. AT ENERG IM. KURCHATOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 041 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--COMBUSTION IN A SINTERING LAYER -U-

AUTHOR-(04)-BRATCHIKOV, S.G., GROSHEV, M.YA., KHUDOROZHKOV, I.P., TUMASHEV, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(4), 46-50

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS, MATERIALS

TOPIC TAGS--IRON ORE, SINTERING FURNACE, COMBUSTION KINETICS, CARBON, CARBON DIOXIDE, GAS ANALYSIS, COMBUSTION TEMPERATURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0803 STEP NO--UR/0148/70/013/004/0046/0050

CIRC ACCESSION NO--AT0132901

UNCLASSIFIED

2/2 041 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132901

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMONG THE COMPLEX PROCESSES GOING ON DURING SINTERING OF AN IRON ORE BATCH, THE COMBUSTION OF C AND THE REDN. OF FE OXIDES ARE SIGNIFICANT. BOTH PROCESSES EXERT AN EFFECT ON THE COMPN. OF THE GAS PHASE. THE COMBUSTION OF FUEL IN THE LAYER DILD. BY INERT MATERIAL WAS INVESTIGATED 1ST. THE CHANGE IN THE GAS COMPN. IN THE O ZONE IS ANALOGOUS TO THE CHANGE IN THE GAS COMPN. DURING THE COMBUSTION OF THE FUEL IN A DENSE LAYER WITHOUT INERT MATERIALS BEING PRESENT. THE INTERACTION BETWEEN C AND THE GAS TERMINATES SOONER THAN THE REDN. REACTION OF CO SUB2 GAS DEVELOPS. .THE COMBUSTION OF C IN THE LAYER OF A BATCH CONTG. FE OXIDES IS ACCOMPANIED BY OXIDN. REDN. REACTIONS, THE EFFECT OF WHICH ON THE COMPN. OF THE GAS AT VARIOUS C YIELDS IS KNOWN. AT LOW C CONSUMPTION, FAVORABLE CONDITIONS ARE CREATED FOR THE OXIDN. OF LOWER FE OXIDES OF THE BATCH, AS A RESULT OF WHICH A LOSS IN CO SUB2 CAN TAKE PLACE. IF FEO IS NOT PRESENT IN THE BATCH, THEN THE COMPN. OF THE GAS IS STABILIZED. DECREASING THE FUEL CONTENT IN THE BATCH RESULTS IN A DECREASE IN THE TOTAL SURFACE OF INTERACTION OF C AND O. THE START OF COMBUSTION DOES NOT ALWAYS COINCIDE WITH THE INSTANT OF ATTAINMENT OF THE TEMP. CORRESPONDING TO THE INFLAMMATION POINT OF THE SOLID FUEL. A COINCIDENCE IS OBSD. ONLY AT LOW C CONTENTS (LESS THAN OR EQUALS TO 3.0-3.3PERCENT) IN THE BATCH. AT HIGHER C CONTENTS (4.0-5.0PERCENT), THE COMBUSTION COMMENCES LATER. TO THE LOW C CONTENT CORRESPONDS A HIGHER CONTENT OF RESIDUAL O IN THE GAS. UNDER THESE CONDITIONS, THE COMBUSTION OF THE FUEL COMMENCES AT LOWER TEMPS.

FACILITY: URAL. POLITEKH. INST., SVERDLOVSK, USSR.

UNCLASSIFIED

USSR UDC 621.762.001:669.296'784

NEZHEVENKO, L. B., GROSHEV, V. I., GUREVICH, B. D., and BOKOV, O. V.

"Influence of Production Conditions of Zirconium Carbide Powder on Properties of Sintered Specimens"

Tugoplavk. karbidy [Refractory Carbides -- collection of works], Kiev, Nauk. dumka Press, 1970, pp 58-61 (Translated from Referativnyy Zhurnal-Metallurgiya, No 2, 1971, Abstract No 2 G403 by the authors)

Translation: The influence of the content of incompletely reduced oxides on the sintering qualities of products of Zr carbide powders is studied. An increase in the content of O in ZrC powders of from 0.2 to 7% decreases the rate of grain growth of finished products and helps to stabilize grain size. A method is developed for production of specimens of Zr carbide of high density. 3 figures; 2 tables; 7 biblio. refs.

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USSR UDC 621.762.2:669.269'784

GUREVICH, B. D., NEZHEVENKO, L. B., GROSHEV, V. I., and GUDOVICH, A. P.

"New Methods for Dispersion of Refractory Metal Carbide Powders"

Tugoplavk. karbidy [Refractory Carbides -- collection of works], Kiev, Nauk. dumka Press, 1970, pp. 40-44 (Translated from Referativnyy Zhurnal-Metallurgiya, No. 2, 1971, Abstract No. 2 G438 by the authors)

Translation: The optimal modes are determined for powdering of Zr carbide by ultrasonics and in a planetary centrifugal mill. Grinding by ultrasonics produces spherical powders with high dispersion and small quantities of rubbed impurities. The impurities rubbed from the surface of the mill during grinding can be reduced by using a Zr carbide liner. 2 figures; 2 tables; 6 biblio. refs.

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1/2 017 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--ON THE REGULATION OF THE ENZYME ACTIVITY IN THE TRICARBOXYLIC ACID CYCLE IN BACILLUS BREVIS G. B. -U-

AUTHOR--SHESTAKOV, S.V., GROSHEV, V.V.

COUNTRY OF INFO--USSR

SOURCE--MIKROBIOLOGIYA, 1970, VOL 39, NR 2 PP 288-292

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ENZYME ACTIVITY, BACILLUS, CARBOXYLIC ACID, AMMONIUM COMPOUND, CULTURE MEDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/0416 STEP NO--UR/0220/70/039/002/0288/0292

CIRC ACCESSION NO--AP0100898

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0100899

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMMONIUM IONS WERE SHOWN TO TAKE PART IN THE REGULATION OF THE ENZYME ACTIVITY IN THE TRICARBOXYLIC ACID CYCLE (TAC) AS WELL AS IN THAT OF ISOCITRATE DEHYDROGENASE (ID) AND MALATE DEHYDROGENASE (MD). THE EFFECT OF AMMONIUM IONS AND COMPOSITION OF ENZYME GROUPS, REGULATED BY THE IONS, DEPENDED ON THE CARBON SOURCE. THE SEQUENCE OF TAC REACTION IN THE CELLS OF P PRIME POSITIVE AND P PRIME NEGATIVE VARIANTS OF BAC. BREVIS, GROWING ON MEDIA WITH PYRUVATE OR GLUCOSE, WAS DIFFERENT. CLOSED CYCLE OPERATED IN THE P PRIME NEGATIVE CELLS, WHILE IN THE P PRIME POSITIVE CELLS WITH A LOW LEVEL OF ALPHA KETOGLUTARATE DEHYDROGENASE SUCCINATE WAS FORMED VIA THE REDUCTION PATHWAY. THIS DIFFERENCE WAS DUE TO A CHANGED ISOENZYME COMPOSITION OF MD. THE RATIO OF MD ISOENZYMES WAS CONTROLLED BY EXOGENOUS AMMONIUM IONS.

UNCLASSIFIED

GROSHEVA, T N.

Social Hygiene & Health

SCOPE OF MEDICAL CARE FOR SENIOR CITIZENS IN URBAN POLYCLINICS (ACCORDING TO DATA REFERABLE TO VORONEZH)

UDC: 616-053.9-082-039.57+352.9

Article by T.N. Grosheva, Chair of Social Hygiene and Public Health Organization (Head: Professor I.P. Furmenko), Voronezh Medical Institute; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 9, 1972, submitted 11 April 1972, pp 34-39

The scope of medical care for senior citizens is broadening with each year in urban polyclinics. This is attributable to the increase in the population and share of senior citizens in the overall structure of absolute number and the distinctive features with regard to their physical condition and course of illness. Investigation of the scope, nature, and organization of medical care of this population group is of interest with regard to the system of planning requirements for different types of care for this group. Complex investigations dealing with this problem were pursued by Z.G. Revuzskaya, F.A. Bogdanovich and V.Ch. Brzhenskiy, M.V. Petrekina, and Yu.I. Alobovskiy.

Our task was to study the prevailing scope and nature of outpatient polyclinic care for individuals over 60 years of age, as well as to determine the level and quality of dispensary care in regional urban polyclinics, and to work out recommendations, on the basis of data obtained, to develop and improve geriatric care in Voronezh. The sample method was used in four municipal polyclinics in eight therapeutic districts with a total adult population of 22,000. The principle of "patchboard survey" was applied in choosing the institutions. In the districts selected, which reflected with a sufficient degree of probability the entire set, determination was made of number and age and sex composition of the inhabitants, we studied the structure of visits and requests for care, doctors' load pertaining to polyclinic visits and house calls, volume of dispensary care, etc.

Data were gathered according to a specially developed card on which information was entered from primary reports about all visits to the polyclinic and house calls in 1967 referable to the residents of these districts 60 or more years of age. We filled out 2,834 cards.

JPRS 57351
27 Oct 72

USSR

UDC 666.764.36

KARPINOS, D. M., GROSHEVA, V. M., MIKHASHCHUK, YE. P., and TOTSKAYA, G. A., Institute of Problems of Material Science, Academy of Sciences UkrSSR

"A Refractory Based on Chromium Oxide"

Moscow, Ogneupory, No 1, 1974, pp 55-56

Abstract: Studies are performed on the production of refractory materials from chromium oxide, reinforced with mullite single crystal fibers. The promise of the use of mullite fiber as a reinforcing component to increase the thermal and impact strength of products of chromium oxide is demonstrated.

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GROSHEVA, V. M.

ARMY MATERIEL COMMAND

U.S. ARMY

FOREIGN SCIENCE AND TECHNOLOGY CENTER

SYNTHETIC MULLITE AND MATERIALS BASED ON IT

by

V. M. Grosheva et al.

Country: USSR

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Refractory Materials

UDC 549.2

USSR

GROSHEVA, V. M., KARPINOS, D. M., PILIPOVSKIY, Yu. L., PANASEVICH, V. M., GAIOVA, T. I., AND SHAMATOV, Yu. M., Institute of Problems of Material Science, Academy of Sciences Ukr SSR

"Refractory Material on an Aluminum Nitride Base"

Moscow, Ogneupory, No 5, May 71, pp 54-56

Abstract: An investigation was made of the reinforcement of aluminum nitride by fiberlike single crystals of mullite ($3Al_2O_3 \cdot 2SiO_2$) synthesized at the Institute of Problems of Material Science, Academy of Sciences Ukr SSR. The refractory material is characterized by chemical inertness and high resistance to thermal shock. It is recommended for lining of high-temperature installations operating in aggressive media, in the presence of abrupt thermal cyclings, and by high mechanical loadings. Three figures, two tables, six bibliographic references.

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USSR

UDC 666.3.022.519

GROSHEVA, V. M., KARPINOS, L. M., PILIPOVSKIY, YU. L., Candidates of Technical Sciences, GAYOVAYA, T. I., SHAMATOV, YU. M., Institute of Problems of Materials Science, Academy of Sciences, Ukrainian SSR

"Impact-Resistant Ceramic Materials"

Moscow, Steklo i Keramika, No 11, Nov 70, pp 36-37

Abstract: The authors have conducted a project on increasing the impact strength of ceramic material on the basis of boron nitride by the method of reinforcement with filamentary monocrystals of mullite ($3Al_2O_3 \cdot 2SiO_2$), obtained in the Institute of Research on the Problems of Materials, Academy of Sciences, Ukrainian SSR. The reinforcement method developed by them makes it possible to obtain products on the basis of boron nitride, which possess high impact strength. The thermal stability of the products permits their use as insulating materials in high-temperature units with cyclical heating. The chemical inertness and the high impact strength permits the use of the obtained

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201020015-8"

USSR

GROSHEVA, V. M., et al, Steklo i Keramika, No 11, Nov 70, pp 36-37

material in chemical machine building. 1 figure, 1 table, 1 footnote bibliographic reference, 3 bibliographic entries.

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USSR

UDC: 621.791.06

GROSHEV, V. S.

"Seventh All-Union Scientific and Technical Conference on Diffusion Welding in a Vacuum"

Avtomaticheskaya Svarka, No 6, June 1972, pp 76-77

Abstract: The Seventh All-Union Scientific and Technical Conference on Diffusion Welding in a Vacuum, called by the Ministries of Higher and Special Secondary Education of the USSR and RSFSR and the Problems Laboratory for Diffusion Welding in a Vacuum was held in Moscow, 25-27 January 1972. Over 500 representatives of 150 industrial enterprises, scientific research institutes, and schools took part in the conference, as well as specialists from the GDR, Czechoslovakia, Poland, and Yugoslavia. The conference heard and discussed over 60 reports. Subjects discussed included: the contemporary state and tasks of diffusion welding; development and improvement of the theory of diffusion welding; the electronic mechanism of diffusion welding of refractory metals; the development of the volumetric interaction in diffusion welding of dissimilar materials; studies on processes of deformation and activation in diffusion welding in a vacuum and the significance of diffusion and creep in these processes; the significance of surface energy in the formation of joints; problems

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GROSHEV, V. S., Avtomaticheskaya Svarka, No 6, June 1972, pp 76-77

of the kinetics and mechanism of formation of joints in diffusion welding of similar metals; surface diffusion in diffusion mass transfer between welded materials and the influence of carbon on the mechanical properties of joints between different steels and the diffusion mobility of alloying elements; the efficiency of blades produces by melting, soldering and diffusion welding; the high-temperature efficiency of joints in complex alloyed nickel alloys; the influence of composition of saturating impurities and gasses in electrolytic nickel on the structure and properties of joints of stainless steel with electrolytic nickel; diffusion welding in a medium of hydrogen; the influence of temperature on changes in the boundary zone of a bimetal produced by diffusion welding in a vacuum; a calculation method for determining even heating time of a continuous cylinder during induction heating; the theory and technology of welding of metal ceramics with various materials; diffusion metallurgy; improvement of the vacuum-mechanical characteristics of structural materials by heat and vacuum treatment; formation of joints in various types of electric-vacuum glasses with various materials by diffusion welding; the adhesion interaction of refractory metals and their alloys; interaction of refractory alloys protected with coatings; diffusion welding of copper to alloys of aluminum; diffusion welding of fiber and porous materials; manufacture of tools and stamps by diffusion welding; and problems of the manufacture

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of equipment and problems of the manufacture of equipment and creation of new installations for diffusion welding in a vacuum.

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Glass and Ceramics

USSR

UDC 621.002.3:666.6

KARPINOS, D. M. (Professor, Doctor of Technical Sciences), and GROSHEVA, V. M. (Candidate of Technical Sciences)

"New Ceramic Material"

Moscow, Mashinostroitel', No 5, May 72, p 11

Abstract: The creation of structural materials on a nonmetallic base is one of the current central problems. Ceramics featuring high refractoriness, chemical inertness, high wear resistance, and low specific density hold high promise in this respect. However, their low resistance to impact stresses and equally low resistance to cyclic heating pose limitations on their applications for machine parts. The Institute for Problems in Science of Materials, Academy of Sciences UkrSSR has developed a method of producing ceramic materials in which the aforementioned shortcomings have been overcome by reinforcing the ceramic matrices with filamentary crystals of mullite. The high principal properties of the new materials (density, 3.1 g/cm^3; tensile strength 170 kgf/mm^2; refractoriness, 1910°C; insolubility in acids) make them suitable for use as structural parts for service under high thermal and stress conditions both in chemical machinery and metallurgy. (1 table, 1 bibliographic reference)

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1/2 022 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--THE TREATMENT OF APICAL PERIODONTITIS -U-

AUTHOR--GROSHIKOV, M.I.

COUNTRY OF INFO--USSR

SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 2, PP 66-70

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORAL DISEASE, DENTISTRY, ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1985/1848 STEP NO--UR/0511/70/049/002/0066/0070

CIRC ACCESSION NO--AP0101893

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0101893

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SUMMARY. PERIODONTITIS IS ONE OF THE WIDELY SPREAD DISEASES AND OCCUPIES THE THIRD PLACE IN STOMATOLOGY. MODERN REQUIREMENTS INVOLVE THE SETTING UP OF RAPID METHODS OF TREATMENT, PREVENTION OF EXACERBATIONS OF THE INFLAMMATORY PROCESS AFTER ACTIVE THERAPY. FOR THIS PURPOSE DIFFERENT METHODS OF ADMINISTERING ANTIBIOTICS ARE RECOMMENDED. IN THE TREATMENT OF CHRONIC PERIODONTITIS OF MULTIRADICULAR TEETH WITH POOR PATENCY OF CANALS A PROMINENT PLACE IS OCCUPIED BY PHYSIOTHERAPY AND IMPREGNATION TECHNIQUES OF ROOT CANAL TREATMENT. THE PAPER ENNUMERATES THE MOST EFFECTIVE DRUGS FOR THE TREATMENT, AS WELL AS FILLING MATERIALS FOR THE CANAL. THE SCHEME FOR THE TREATMENT OF ACUTE AND CHRONIC APICAL PERIODONTITIS IS PRESENTED.

UNCLASSIFIED

USSR UDC: 621.385.6

BERBASOV, V. A., GROSHKOV, I. M., KUZNETSOV, M. I., Gor'kiy State University

"Experimental Confirmation of the Existence of a Static Synchronous State of the Electron Cloud in the Preoscillation Mode of a Magnetron"

Gor'kiy, IVUZ Radiofizika, Vol 15, No 6, 1972, pp 944-947

Abstract: The paper presents the results of measurements of electric field strength in the sporadic part of the electron cloud of a magnetron diode in magnetic fields appreciably exceeding critical strength. A comparison of the experimental results with theoretical data shows that the state of the space charge in the sporadic section of the electron cloud in a cylindrical magnetron under preoscillation conditions is close to the static synchronous state.

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USSR

UDC 616.936-084.4-036.8(574)

RUSSINA, YE. K., GROSHKOVA, I. M., and RYBALOVA, R. N., Ministry of Health Kazakh SSR; Kazakh Institute of Epidemiology and Microbiology; Republic Sanitary-Epidemiological Station

"Results of Malaria Control in the Kazakh SSR"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 41, No 6, Nov/Dec 72, pp 687-689

Abstract: In 1954 malaria as a mass disease had been eliminated in the whole of the Kazakh SSR with the exception of Eastern Kazakhstan Oblast'. The number of malaria cases in that year was 14.6 per 100,000 population. It decreased to 0.6 per 100,000 population in 1960 (59 cases, of which 25 were of foreign origin) and 169 cases in 1961-67, of which 74 were of local origin. In 1968 there was not a single case of malaria of local origin. Although malaria has been practically eliminated since 1960 in Kazakhstan, just as in the whole of the USSR, vigilance is indicated because of the possibility of importation of the infection from abroad and increased chances for breeding of mosquitoes in connection with the expansion of irrigated agriculture and the construction of water reservoirs. Preventive measures are being carried out in areas of irrigated fields, regions in which rice is grown, and areas in which water reservoirs and hydraulic engineering installations are being constructed.
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